

IntelliFillTM i.v.

Human Intelligence, Robotic Performance



Leesburg Regional Medical Center Automates IV Admixture Program with IntelliFill i.v.

Novation Member Hospital Deploys Healthcare Technology to Advance Patient Safety



Patient safety is ranked as the number one priority by nearly 50% of our nation's health system leaders and roughly 40% cite financial health as their main concern. ForHealth Technologies' IntelliFill i.v.TM is helping hospitals across the country accomplish both their patient safety and financial objectives despite staff shortages, increasing rates of patient acuity and ever-increasing numbers of complex new medications. Leesburg Regional Medical Center (LRMC) is among the growing list of hospitals using technology to help them accomplish their patient safety goals and to improve operational efficiencies.

In 2004, LRMC had clearly defined goals for their hospital as they evaluated the IntelliFill i.v. system to automate their small volume IV preparation. Led by Director of Pharmacy, Alan Frashier, the hospital pharmacy's objectives included achieving <USP 797> compliance, advancing patient safety and reducing drug costs. Their mission was to accomplish these goals with the help of state-of-the-art pharmacy automation.

"USP 797 was an impending influence at the time and we thought ForHealth's IntelliFill would take us a step closer toward compliance. We also did a cost savings analysis and knew we could prepare small volume IVs more cost effectively with automation," said Frashier. "Key to success is identifying the right applications within your organization, as there may be hidden gems. Once those areas are found, the development of partnerships with those affected by the system is crucial." He adds, "In our case, we knew the system would have an impact on the medication delivery practices. Thus, I wanted nursing to not only be comfortable with the technology, but to also see the true value in implementing a system that would deliver barcoded syringes to the bedside."

To achieve this, Frashier worked closely with Director of Surgical Services, Cindy Spradlin, who oversees LRMC's Nursing Department. Says Spradlin, "From a nursing perspective, we realized the system would lay the groundwork for further patient safety initiatives, especially BPOC, and it required only slight changes to our administration process." Spradlin adds, "We knew we would benefit from the changes and were confident we would easily adapt to them."

Leesburg Regional Medical Center has grown from a small, community-based hospital built in 1963 to a comprehensive medical center with 309 beds. Located in Leesburg, Florida, LRMC is a member of Novation, a health care contracting services company that delivers unmatched savings and value to nearly 2500 members.

Case Study





Getting Started

Upon completion of a thorough benefits analysis, LPMC selected IntelliFill i.v. and began preparation for receiving and implementing the system, which took place in late 2004. A select group of the hospital's inpatient pharmacy technicians were assigned to operate and maintain the system.

The IntelliFill operators attended comprehensive operating training and a member of ForHealth's Nurse Consulting team oriented and trained the nurses on each of LPMC's shifts. "ForHealth did an excellent job with our implementation and training processes, and helping with the entire transition, especially with the nurses," said Frashier.

Initially, the pharmacy operated a single morning shift and produced saline flushes. Gradually, various antibiotics were added to the IntelliFill i.v. system's production. Comments Frashier, "Our high volume antibiotics were a clear win for us."

Making Key Adjustments

During the first months of operation, several factors influenced the productivity and optimization of IntelliFill. "We made assumptions that productivity would be up and running in a short period of time and did not anticipate certain obstacles," said Frashier. "Initially, we experienced two limiting factors – labor resources and storage/space constraints for the syringes – that prevented us from meeting our productivity plans as quickly as expected." The system's location, in the heart of the inpatient pharmacy, was also a problem as staff had to walk around the robot to access other areas of the pharmacy.

At this point, LPMC took full advantage of ForHealth's exceptional customer support team to get back on track. A ForHealth Product Specialist, along with its nurse and pharmacist consulting services, reviewed plans and worked with the pharmacy to make changes that ultimately resulted in more effective utilization of IntelliFill. The pharmacy also moved IntelliFill out of the main traffic flow, which helped to improve overall workflow. LPMC experienced almost immediate improvements and gradually increased their daily production to approximately 2300 syringes, for an average monthly savings of \$15,000-\$20,000.

"The product specialist helped us deal with our immediate staffing issues and freed us up to perform various other tasks," said Pharmacy Operations Manager, George Grimberg. "That, along with moving IntelliFill and other system enhancements, has helped us increase production."

Most recently, ForHealth implemented their latest automated bagger technology with an incline conveyer and a Bluetooth communication device. The combination enables IntelliFill operators to confidently leave the immediate area for extended periods of time to perform other duties for the pharmacy in and outside the department.

On the Horizon: More Savings & Patient Safety

LPMC continues to make progress with their IntelliFill system and in deploying technology to address patient safety initiatives.

According to Frashier, they are currently evaluating expansion to include medications for the OR and the Heart Cath Lab. "The medications we're considering are either high volume for their specific areas or ones that we project will save us significant dollars by automating. We are currently evaluating labetalol, lidocaine 2%, propofol, succinylcholine, ephedrine, and vecuronium for automated production."

Patient safety is a high priority for LPMC and their decisions to make effective use of technology to achieve their goals is evident. LPMC has implemented a new pharmacy information system, which will serve as a foundation for computerized physician order entry (CPOE). The hospital also plans to enhance the quality of their medication administration with bedside point-of-care technology (BPOC) and full eMAR capabilities (electronic medication administration record) by the spring of 2008.

The automation of their IV preparation is a key factor in LPMC's patient safety strategy moving forward. "We are confident we have made the right decision for our IV admixture program," said Frashier. "With IntelliFill delivering barcoded syringes to the bedside, we will be able to more fully realize the value of our BPOC technology once it's in place."



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